

Technology

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Home Computer: Demand Lags

WHAT has happened to the home computer? What was once thought to be a billion-dollar, mass-market item that would revolutionize our lives seems suddenly to have lost its luster.

Even as such giant companies as Texas Instruments Inc. introduce new systems for the consumer, industry analysts, market researchers and even some executives in the field are taking a second look at the prospects for these, the smallest of computers.

The central question about the market for these systems seems to be whether the consumer really wants to pay \$500 to \$3,000 to balance the checkbook, educate the children and turn on the sprinklers. At this point the answer would seem to be no.

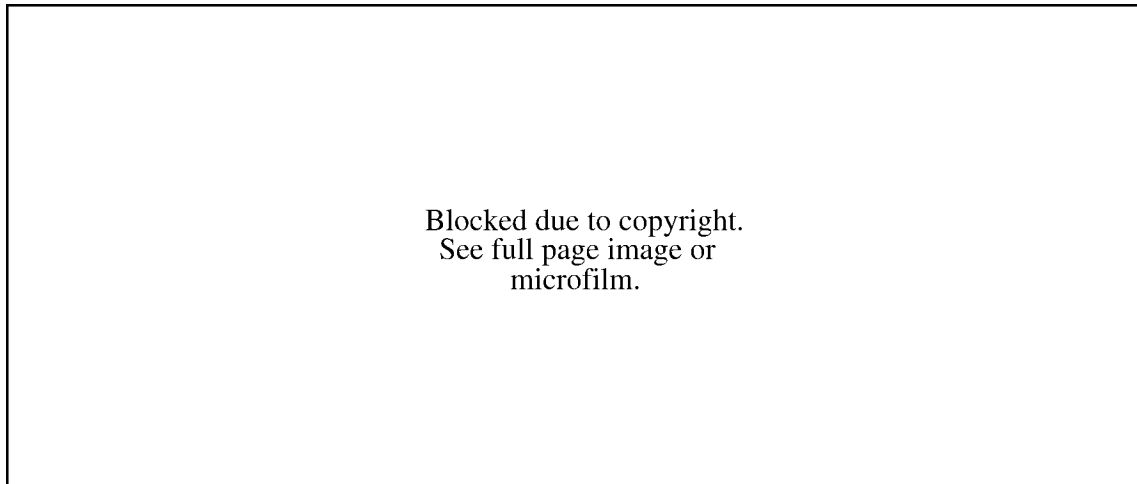
According to knowledgeable analysts, this is a market that never was. What today goes by the name of home computer, they say, is and always has been a hobby product for computer enthusiasts and not the average homeowner. And when the needs of these enthusiasts are satisfied, the analysts add, the market will have been saturated. Most manufacturers apparently realize this and are moving in other directions.

For example, when Lewis F. Kornfeld Jr., president of Radio Shack, the leading manufacturer in the field, recently introduced the company's latest line of small computers, the TRS 80 Model II, he stressed that it was not aimed at the consumer market but rather for the small-business man. "Don't call them home computers," he begged reporters at the news conference.

Then too, the market research company, Creative Strategies International, which has long been considered bullish on home computers, recently revised its market forecast downward for next year, from \$140 million to \$126 million.

With the exception of Texas Instruments, most of the major manufacturers in the business, like Apple Computer Inc. and Commodore International, are exhibiting their wares this week not at the Consumer Electronics Show in Chicago, but in New York at the professionally oriented National Computer Conference.

"The distinct trend in the personal computer indus-



A Texas Instruments employee demonstrating the company's new 99/4 home computer in Chicago

The New York Times / Perry Riddie

try today is that virtually all manufacturers are moving expeditiously toward serving the professional, educational and very-small-business markets," said Benjamin M. Rosen, an electronics analyst with Morgan Stanley & Company.

At present, the industry, only about four years old, is operating in a three-tier market. At the low end, where most of the 50-odd companies in the business participate, machines cost about \$500, and, because of their limited hardware and software, are geared toward home education and entertainment — video games. These systems soon will face stiff competition from the makers of programmable calculators, which will be offering sophisticated calculators that will improve many of the functions.

In the middle tier are machines that sell for about \$1,000, such as Texas Instruments' 99/4 and the Apple II computer. These are designed to handle income taxes and other family finances as well as to operate appliances. The trouble here is that without the addition of \$1,000 worth of peripheral equipment, such as disk memory files, printers and maybe a telephone interface device, they offer little more in usable computing power than the low-end machines.

At the high end, there are machines aimed largely at the small-business man. These can cost as much as \$8,000, depending on what additional hardware and software is purchased, but function much as commercial minicomputers do, at less cost.

If in fact the home computer market never materializes, the need for the small-business machine is here today. The accountant, the two-person law firm, and the dry cleaner chain, for example, are all potential users of a machine like Radio Shack's TRS 80 Model II, which the company will be selling through its 7,000 retail stores.

The Radio Shack computer hardware includes an 80-character-per-line display, upper- and lower-case characters, and a memory system that can be expanded to two million characters.

But the secret to success in this market really involves software, which is easy to use. The small-business man, even more than the homeowner, does not want to become a professional programmer just to use the system. These machines can do the payroll and perform such additional office tasks as general ledger accounting and inventory and mailing list management.

Just as the maker of the low-end home computer is facing competition in the form of sophisticated calculators, manufacturers of such small-business systems are bumping up against — but are not yet in — territory controlled by the commercial minicomputer maker. It remains to be seen whether companies like Radio Shack can provide the kind of maintenance and software support that has been traditional in the commercial systems business.